Tamson Instruments
Specification sheet

Specifications TLV25

Tamson Low Temperature Visibility Bath 25 litres - ASTM D445 - IP71 - ISO 3104

Item	Unit	TLV25
P/N 230V/50~60Hz		00T0650
P/N 115V/60Hz		00T0780
Range*	-80°..+60°C /-130°..140°F	
Reading	Standard °C, °F on request	
Window	[mm]	148 * 213
Setting ±	[°]	0.1
Stability ±	[°C]	0.04
Heating	[W]	1500
Heaters		1
Bath volume	[L]	25
Opening	[mm]	3 x ø51 mm
Depth	[mm]	400
Length	[mm]	570
Width	[mm]	410
Height	[mm]	540
Opening Cold finger	[mm]	ø 50 * length 240
Weight	[kg]	38.5
Power	[W]	1700
* -80°C only in combination with TCC-IC		

- **Three positions**
- **Turn table**
- **Auto tuning**
- **-80°C with TCC-IC**
- **Heated window**

TLV25

General
The TLV25 system contains a 25 liter Dewar flask. The fluid in the flask must permanently be cooled by a separate immersion cryostat. The temperature set point is maintained via a microprocessor controlled heating element. When using TCC-IC, minimum working temperatures of minus 80°C can be reached. All presented data is measured by using a TLV25 filled with 25 liters of methanol and a TCC-IC immersion cooler. At the minimum temperature still enough heat removal is provided to maintain stable temperature control, even when glass capillary viscometers are placed in the bath for viscosity determination. The system's accuracy is better than the requirements of ASTM D445, IP71 and ISO 3104. The bath is illuminated by a fluorescent light built-in behind the Dewar flask. The top cover has a turn table construction containing three openings of ø51 mm, each with a round lid. By turning the cover, the immersed glass capillary viscometer can be positioned in front of the window. This window is heated to keep clear sight at low temperatures.

Immersion cooler
The cooler is a separate device having enough capacity to cool the 25 litres of methanol. Accuracy and performance only can be achieved with TCC-IC

Stability TLV25 - TCC-IC [in °C] min, max(peak) values over one hour		
Temperature TLV25	Absolute inaccuracy	Delta T(peak) (Between two points)
0	± 0.029	0.02
-20	± 0.023	0.02
-30	± 0.025	0.02
-40	± 0.029	0.02
-50	± 0.025	0.02
-60	± 0.020	0.02

Span
Minus 80°C with TCC-IC*, without ambient...+60°C.

Accuracy
The set point can be set in steps of 0.1°C from - 90°C up to plus 60°C (-130..140°F). Overall accuracy is better than ± 0.03°C.

Temperature readout
Standard available in °C, on request in °F.

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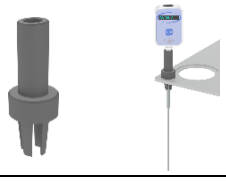
Safety
The bath conforms CE regulation. In case of error a fixed safety thermostat will switch-off the bath from the mains supply.

Accessories		
P/N	**Picture**	**Description**
00T0300		TCC-IC 230V/50Hz Immersion cooler, to cool the TLV25 to -80°C
00T0301		TCC-IC 230V/60Hz Immersion cooler, to cool the TLV25 to -80°C
E20 thermometer		Please see specification sheet “E20 thermometers”
14T0303		Adapter to insert an E20 thermometer in the opening of the cover
Viscosity accessories		Please see specification sheet "Viscosity accessories”, e.g. viscometers, viscometer holders, bath fluids, general purpose reference standards, etc